PREVENT STORM WATER CONTAMINATION
Best Management Practices for
Plant and Tree Nurseries

SIC Codes: 0181, 5193

NAICS codes - 111421, 111422, 422930, 444220

General Information:

1) Federal Storm Water regulations require the City to reduce the quantity of pollutants that enter our storm drains, rivers and washes from rainwater and other sources. 2) Water from any source that contains contaminants is prohibited from entering the storm drain system. This system includes streets, catch basins (street grates), ditches, washes and rivers. 3) Commercial and industrial wash or wastewater is prohibited from entering the storm drain system, street or any other outside area. 4) All activities that use soap, solvents, degreasers or any other chemicals must be hauled to a landfill or discharged into the sanitary sewer through a sand/oil interceptor or approved pretreatment device. 5) City Code 32C requires any person or business that has a "potential" to pollute storm water, to develop and implement a Storm Water Management Plan (SWMP). 6) The BMPs listed here are not inclusive and must be tailored for your facility. 7) Most agricultural chemicals sit in the top layer (3-6 inches) of soil and are washed off when it rains, recycle the rain. Recycle rain or irrigation water if possible.

Watering and chemical application

- Apply fertilizers to each plant individually, rather than spraying or broadcasting.
- Surround each plot with a low, small berm of earth to reduce storm and watering runoff.
- Don't apply pesticides or fertilizers when wind or rain is in the weather forecast.
- Collect clippings and trimmings, and start a compost pile to make organic fertilizer.
- Apply only the correct dosage of pesticides, herbicides, and fertilizers. Using more than the correct dosage will only waste money.
- Collect runoff from rain and watering activities and reuse it. It already contains nutrients that washed out of the soil.
- One pass or untreated evaporative cooler water can be used to water plants.
- Group plants by type when possible, for example, plants with low, medium or high water requirements.

Outdoor loading and unloading

- Train employees on proper chemical loading and unloading techniques and emergency situations.
- Inspect all chemical containers prior to loading and unloading. Reject any leaking or damaged containers or bags from suppliers.
- Use dry clean-up methods instead of washing the area down. Recycle spilled chemicals, if possible.
- Inspect the loading and unloading area on a regular basis to determine if problems exist and initiate corrective measures.
- Divert storm water around chemical loading and unloading areas using berms, swales, or dikes.
- Avoid loading and unloading chemicals during rain and wind storms.

Material handling

- Perform all chemical handling in a covered, bermed, or enclosed area on an impervious surface for easy clean-up.
- If you have storage tanks, inspect them regularly for potential leaks, and perform preventive maintenance.
- Store containerized materials in a protected, secure location, away from drains.
- Keep records to identify quantity, receipt date, expiration dates and disposal routes of chemicals.
- Don't pour chemicals into a sink, floor drain, storm drain, wash or the street.
- Use spill troughs for chemical drums with taps to catch leaks, drips and spills.

Chemical and material storage

- Cover all storage piles of sand, gravel, loam, pesticides, and fertilizers with a roof or tarp.
- Store chemicals in a dry place and install berms around storage piles to minimize storm water run-on and run-off.
- Do not allow liquids to enter floor drains in storage areas.
- Provide sufficient containment for outdoor storage areas for the larger of either 10% of the volume of all containers or 110% of the largest tank.

- Store reactive, ignitable, or flammable materials in compliance with local fire codes.
- Secure and carefully monitor hazardous materials (like ammonium nitrate) to prevent theft, vandalism and misuse of materials.

Chemical mixing operations

- Clean all equipment exposed to chemicals after mixing operations are complete.
- Remove spilled materials and settled dusts from mixing area by sweeping and shoveling on a regular basis.
- Start an inventory control program for all chemicals.
- Use drip pans under mixing equipment to catch spills. Clean pans between each use to reduce cross-contamination.

Vehicle maintenance and repair

- Perform vehicle maintenance on an impervious pad (sealed concrete) with a roof. This will prevent rain from washing pollutants (like oil) into your yard.
- Limit motor vehicle use around plants, oil and fuel droppings can harm the plants.
- Drain used oil filters at least 24 hours before disposal or recycling.
- Dispose of oily or greasy rags, oil filters, batteries, spent coolants (antifreeze), used oils and degreasers regularly.
- Use drip pans under trucks and forklifts in parking areas.
- If you generate a hazardous waste, follow all federal and state regulations. Observe all time and quantity requirements.
- Keep waste streams (waste oil and transmission fluid, etc) separate. Non-hazardous substances that are mixed with hazardous substances are considered a hazardous waste.
- Store all new or spent chemicals under a roof or tarp on an impervious surface.
- Transfer all used liquids to the proper storage container. Do not leave full drip pans or other open containers around the shop area.
- All hazardous waste containers must be labeled. Track the recycling or disposal of this material.
- See the Auto Repair and Maintenance BMP brochure or call Storm Water Management at 256-3190 for more information on vehicle maintenance.

Training

- Train personnel on proper chemical use, storage, cleanup and your waste disposal practices.
- Develop, implement and train employees at least annually on the Storm Water Management Plan.

Storm Water Pollution Prevention Plan (SWPPP) or Storm Water Management Plan (SWMP)

- Develop and implement a SWPPP or SWMP.
- All SWPPP's and SWMP's must be submitted to the City for approval.

Inspections

- Conduct an inspection of the facility at least quarterly and complete the storm water BMP checklist.
- Review BMPs after each inspection and modify them within fourteen (14) days and the SWPPP or SWMP as needed.
- Maintain all storm water documentation for at least three (3) years.

If a spill occurs:

- **Stop the source of the spill immediately.**
- **Contain the liquid or powder until the cleanup is complete.**
- **Cover liquid spills with an absorbent material.**
- **Keep indoor areas well ventilated.**
- **Dispose of clean-up materials properly.**
- **Do not use an emulsifier or dispersing agent.**
- **Do not wash anything into the street, storm drain, ditch, wash or river.**

The BMPs found on this page are paraphrased from Federal Storm Water documents 40CFR122, 1995 or later.

Storm Water Management
A member of STORM
STormwater Outreach for Regional Municipalities

Only Rain in the Storm Drain!

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STORM WATER MANAGEMENT SECTION

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